P27032.A09

Serial No.: 10/007.583 IBM Docket No.: DE920010035US1

## LISTING OF THE CLAIMS

Please amend claims 1, 7 and 8; and

Please add new claims 20-32 as follows.

A copy of all pending claims and a status of each claim is provided below.

1. (Currently Amended) A computerized method for generating a recommendation of an item to an advisee, comprising the steps of:

receiving a recommendation request comprising a selected item list from an advisee for a recommendation by a recommendation system;

in response to the recommendation request, computing a plurality of similarity factors based on:

at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item, wherein the advisee profile comprises a plurality of records, each record including a user identifier, an item identifier, and a rating value, such that each record is linked in a first and a second dimension; and

items from the selected item list that indicate similarity between the advisee and a plurality of users of the recommendation system who have previously provided ratings of items from the selected item list;

selecting, from the plurality of users of the recommendation system, neighboring users to the advisee, according to the similarity factors;

generating a recommendation of at least one item of the selected item list, according to the previously provided ratings of the at least one item by the neighboring users.

wherein the similarity factors of the advisee are not calculated with respect to all users for every individual recommendation request.

(Previously Presented) The method of claim 1, wherein all items upon which the step of computing depends are included in the selected item list. P27032.A09
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3. (Original) The method of claim 2, wherein the recommendation of at least one item includes only items that are included in the selected item list.

- (Original) The method of claim 1, wherein the step of selecting neighboring users excludes, any user whose similarity with the advisee is below a predetermined threshold.
- 5. (Previously Presented) The method of claim 1, wherein the step of computing and the step of selecting are executed substantially in parallel by inserting each newly computed similarity factor into a neighbor list in decreasing order of similarity and by limiting length of the neighbor list by excluding a user with lowest similarity if otherwise the neighbor list would exceed a predetermined length.
- (Original) The method of claim 1, further including the step of caching identifiers of the neighboring users, associated similarity factors, and time stamps.
- 7. (Currently Amended) A user profile for a recommendation system, comprising a plurality of records, each record including a user identifier, an item identifier, and a rating value, wherein each record is linked in a first and a second dimension, the first dimension linking records with a same user identifier in a sequence according to the item identifier, and the second dimension linking records with a same item identifier in a sequence according to the user identifier, wherein the system updates only similarity factors between neighboring users and an advisee when a new rating is entered for at least one advisee profile and utilizes an algorithm to determine a ranked matching list of the neighboring users.
- 8. (Currently Amended) A computerized method for generating a recommendation of an item to an advisee, comprising the steps of:

receiving a recommendation request comprising a selected item list from an advisee for the recommendation by a recommendation system;

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in response to the recommendation request, computing a plurality of similarity factors based on at least one advisee profile from at least one newly rated item and determining which at least one user has already rated the item;

selecting a first set of users from a group of users of the recommendation system based on the selected item list;

selecting neighboring users from the first set of users based on similarities between the advisee and each member of the first set of users; and

generating a recommendation of at least one item from the selected item list based on ratings provided by each neighboring user,

wherein the method determines the similarity factors between the advisee and the neighboring users only for the items of the selected item list.

- 9. (Previously Presented) The computerized method of claim 8, wherein the similarities are determined from an advisee profile and user profiles, and the advisee and user profiles are based on advise and user behavior including at least one of buying pattern, item ratings, bookmarked websites, website usage pattern, and user action relative to a particular item.
- 10. (Previously Presented) The computerized method of claim 9, wherein an advisee profile or a user profile is updated when a new piece of information is added thereto.
- 11. (Previously Presented) The computerized method of claim 8, further comprising assigning a confidence factor to each advisee profile and each user profile, wherein the confidence factor is based on the combined effect of selected pieces of information recorded in a user or advisee profile.
- 12. (Previously Presented) The computerized method of claim 8, further including determining similarities between the advisee and each member of the first set of users after receiving a selected item list from the advisee.

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13. (Previously Presented) The computerized method of claim 8, wherein a member of the first set of users is selected as a neighboring user if the similarity between the advisee and the member of the first set of users is better than a predetermined threshold.

- 14. (Previously Presented) The computerized method of claim 8, further comprising assigning a weight to each neighboring user where the weight is greater for a neighboring user have greater similarity to the advisee and the weight is lower for a neighboring user having a lower similarity to the advisee.
- 15. (Previously Presented) The method of claim 1, further comprising updating the selected neighboring users each time a new rating is entered or inferred during the recommendation request.
- 16. (Previously Presented) The system of claim 7, wherein the system updates selected neighboring users each time a new rating is entered or inferred during a recommendation request.
- 17. (Previously Presented) The method of claim 8, further comprising updating the selected neighboring users each time a new rating is entered or inferred during the recommendation request.
- 18. (Previously Presented) The method of claim 1, wherein the selected neighboring users are users who have a similarity factor which is better than a predetermined threshold value.
- 19. (Previously Presented) The method of claim 8, wherein the selected neighboring users are users who have a similarity factor which is better than a predetermined threshold value.

20. (New) The method of claim 1, further comprising creating a user profile for each of the plurality of users, wherein the user profiles do not include any pre-computed similarity factors.

- 21. (New) The method of claim 8, further comprising creating a user profile for each of the users, wherein the user profiles do not include any pre-computed similarity factors.
- 22. (New) The method of claim 20, further comprising selecting each neighboring user when the neighboring user's similarity factor is better than a predetermined threshold factor.
- 23. (New) The method of claim 21, further comprising selecting each neighboring user when the neighboring user's similarity factor is better than a predetermined threshold factor.
- 24. (New) The method of claim 22, further comprising: updating only the similarity factors between the neighboring users and the advisee when a new rating is entered for the at least one advisee profile; and using an algorithm to determine a ranked matching list of the neighboring users.
- 25. (New) The method of claim 23, further comprising: updating only the similarity factors between the neighboring users and the advisee when a new rating is entered for the at least one advisee profile; and using an algorithm to determine a ranked matching list of the neighboring users.
- 26. (New) The method of claim 24, further comprising: for each recommendation request by the advisee, computing for temporary use the similarity factors measuring the similarity between the advisee and the plurality of

users: and

associating the similarity factors with corresponding users to determine, per recommendation request, the neighboring users; and

using the neighboring users determined per recommendation request to provide a basis for calculating the recommendation.

## 27. (New) The method of claim 25, further comprising:

for each recommendation request by the advisee, computing for temporary use the similarity factors measuring the similarity between the advisee and the plurality of users: and

associating the similarity factors with corresponding users to determine, per recommendation request, the neighboring users; and

using the neighboring users determined per recommendation request to provide a basis for calculating the recommendation.

- 28. (New) The method of claim 1, wherein the method determines the similarity factors between the advisee and the neighboring users only for the items of the selected item list.
- 29. (New) The method of claim 8, wherein the similarity factors of the advisee are not calculated with respect to all users for every individual recommendation request.
  - 30. (New) The method of claim 28, further comprising:

storing or updating all ratings in a single large sparse matrix in a computer's main memory; and

postponing any calculations of the similarity factors and the neighboring users until a concrete request for recommendation for the advisee is to be processed.

## 31. (New) The method of claim 29, further comprising:

storing or updating all ratings in a single large sparse matrix in a computer's main memory; and

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postponing any calculations of the similarity factors and the neighboring users until a concrete request for recommendation for the advisee is to be processed.

32. (New) A computerized method for recommending an item to an advisee utilizing a user profile comprising, for each of a multitude of items, at least a rating value and excluding any pre-computed similarity factor measuring similarity between users, wherein the method constructs a recommendation to the advisee and comprises:

temporarily calculating, for use within a recommendation request only, a multitude of similarity factors measuring the similarity between the advisee and the multitude of other users;

associating the similarity factors with the other users;

determining a subset, from the multitude of users, of neighboring users nearest the advisee as determined by the similarity factors; and

recommending at least one item based on the similarity factors of the neighboring users and based on rating values of the items by the neighboring users.